

REMARKS

Reconsideration of the above referenced application in view of the following remarks is requested. Existing claims 1, 3, 5, 7-13, 15, 17, 19-27, 29-30, 32-33, 35 and 39-42 remain active in the application.

ARGUMENT

Claim Rejections - 35 U.S.C. § 103

Claims 1, 3, 5, 7-10, 12, 13, 15, 17, 19-22, 24-27, 29-30, 33, 35, and 39-42 are rejected under 35 U.S.C. §103(a) as being unpatentable over Junqua, et al. (US 6,324,512) (hereinafter Junqua), in view of Cohen, et al. (EP 1 014 277) (hereinafter Cohen), and further in view of Nosohara (EP 0 838 765) (hereinafter Nosohara).

In rejecting independent claims 1, 13, 25, and 33, the Examiner asserted that automatic summarization is well-known in the art simply based on a reference cited in the specification of the above-identified application. This is an incorrect assertion. Automatic summarization is an advanced research area, especially for automatically summarizing search results from the Internet that usually include multiple documents. Although research progress in the past couple of years has made automatic summarization of search results from the Internet feasible in some circumstances, there is still much improvement to be solved by continuing research activities. Therefore, it is clearly an error to assert that automatic summarization of search results from the Internet is well-known in the art, as supported by the declaration from Dr. Yonghong Yan. Because the automatic summarization element is not well-known as asserted by the Examiner, and because Junqua, Cohen, and Nosohara, alone or in combination, do

not teach or suggest this element as claimed, independent claims 1, 13, 25, and 33 are allowable.

In the Office Action dated May 5, 2004, the Examiner asserted that prosodic pattern is inherent in any text to speech conversion. This is incorrect. "In relying upon
5 the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." *Ex parte Levy*, 17 USPQ2d 1461, 1464. Here the Examiner did not fulfill his burden. As supported by the declaration from Dr. Yonghong Yan, adding a prosodic pattern has
10 been a research topic in speech synthesis area for many years. Few speech synthesis systems could produce natural-sounding speech before 2000 because they lacked processing of a prosodic pattern. During the past 3-4 years, many speech synthesis systems have started to use prosodic pattern processing to generate more natural sounding speech than before for an input text. However, prosodic pattern is still a
15 continuing research topic in the speech synthesis area. Therefore, the assertion that prosodic pattern is inherent in any text-to-speech conversion at the time of invention cannot be supported by any fact basis or technical reasoning. Nor is this element taught or suggested by any of the prior art references cited by the Examiner. Because prosodic pattern is not inherent in any text-to-speech conversion or taught or suggested
20 by any of the cited prior art references, independent claims (claims 1, 13, 25, and 33) reciting this prosodic pattern element are thus allowable.

Moreover, the Examiner has not established a prima facie case of obviousness based on a combination of Junqua, Cohen, Nosohara, and the Examiner-asserted well-

known art. First, to establish a prima facie case of obviousness, “there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the reference teachings.” MPEP § 2143. This requirement was emphasized
5 several times by the Federal Circuit. For example, in *In re Kotzab*, 217 F.3d 1365, 55 U.S.P.Q.2d 1313 (Fed. Cir. 2000), the Federal Circuit clearly stated, “to establish obviousness based on a combination of the elements disclosed in the prior art, *there must be some motivation, suggestion or teaching of the desirability of making the specific combination that was made by the Applicant.*” (emphasis added). Here, the
10 Applicant respectfully contends that Junqua, Cohen, and Nosohara provide no motivation toward a language independent voice-based search system as claimed that comprises all of the multiple features of language identification, speaker verification, speech recognition, natural language processing, automatic summarization, automatic translation, speech synthesis, and natural language generation. The Applicant
15 respectfully requests the Examiner to reconsider and withdraw the §103(a) rejection.

As supported by the attached declaration from Dr. Yonghong Yan, who is an expert in the speech and natural language processing field, technologies in this field were previously not sophisticated enough to make possible a language independent voice-based search system, as described in the above-identified application.
20 Furthermore, prior to the date of invention the speed of computing systems was not high enough to make it possible for the claimed search system to work in real-time. This explains why in an earlier time frame Junqua limited its speech processing application to the limited domain of an electronic program guide (EPG), where the search is

conducted in a limited size database of specific terms, where no summarization, language identification, translation, or language generation is necessary, a user is expected to speak in a predictable way, and responses to a user's requests are very simple. Throughout Junqua, there is no suggestion or motivation to expand its teaching to a complex application such as a language independent voice-based Internet search engine because when Junqua was filed in Aug. 1999, adequate speech technologies and computing infrastructure were simply not there yet. Cohen is limited to language identification and Nosohara is limited to text-based language translation. There is no motivation or suggestion based on Cohen or Nosohara to expand its limited teaching in a single area to a complex application as disclosed in the above-identified application, which includes technologies in several complicated areas such as speech recognition, speaker verification, speech synthesis, automatic summarization, and so on.

Additionally, one skilled in the art at the time of the invention would not have thought to combine these disparate elements as claimed because then exiting technologies in speech and natural language processing field were not sophisticated enough for complex tasks as disclosed in the above-identified application yet and real-time processing of such tasks was previously impossible. Thus, one skilled in the art (such as Dr. Yan) would not have thought the present claims were obvious at the time of invention.

Because there is no suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine the reference teachings at the time of the invention, the first basic criterion for a prima facie case of obviousness has not been met.

Accordingly, any assertion of obviousness based on the cited art and the improperly categorized “well known” art is in error. Independent claims 1, 13, 25, and 33 are thus allowable.

Second, to establish a prima facie case of obviousness, there must also be a reasonable expectation of success, which must be found in the prior art references. MPEP § 2143. As stated by Dr. Yan in the attached declaration, technologies in speech and natural language processing field were previously not sophisticated enough to make possible a language independent voice-based search system, as described in the above-identified application. Furthermore, prior to the date of invention the speed of computing systems was not high enough to make it possible for the claimed search system to work in real-time. Either Junqua or Cohen or Nosohara is limited to a simple application which then-existing technologies could support. No possibility of success can be found in either reference for combining them together to come up with a complex search system as claimed in the above-identified application.

Third, to establish a prima facie case of obviousness, “the prior art reference (or references when they combined) must teach or suggest all the claim limitations.” MPEP § 2143. Here, all of the limitations of independent claims 1, 13, 25, and 33 have not been fully evaluated because neither Junqua nor Cohen nor Nosohara nor well-known arts, alone or in combination, suggest every limitation set forth in the above-identified claims. For instance, as presented above, none of the cited references, alone or in combination, teaches or suggests the automatic summarization element and the prosodic pattern element. Therefore, the prior art references do not teach or suggest all the claim limitations in claims 1, 13, 25, and 33.

Because the Examiner has not met any of the three basic criteria of a prima facie case of obviousness based on a combination of Junqua, Cohen, Nosohara, and the Examiner's own asserted well-known art is faulty because of a lack of supporting evidence, the Applicant respectfully request that the 35 U.S.C. § 103 rejection of claims 1, 13, 25 and 33 be withdrawn. These claims are thus allowable.

Furthermore, any rejection based on a hindsight-based obviousness analysis is expressly forbidden by the case law:

Our case law makes clear that the best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references.... Combining prior art references *without evidence* of such a suggestion, teaching, or motivation simply takes the inventor's disclosure as a blueprint for piecing together the prior art to defeat patentability – the essence of hindsight (emphasis added).

In re Dembiczak, 175 F.3d 994, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999). The Examiner appears to be taking the Applicant's disclosure as a blueprint for piecing together in hindsight the prior art to attempt to defeat the patentability of the present invention. For example, in order to assert what is claimed in the above-identified application is a possible combination, the Examiner simply asserted that the automatic summarization element is well-known, and the prosodic pattern is inherent in any text-to-speech conversion. Additionally, the Examiner failed to take the timeframe of the invention into account when making the rejections based on Junqua, Cohen, and Nosohara. What may seem obvious to the Examiner today based on current computing technologies and the impermissible use of hindsight was not obvious to one skilled in the art at the time of invention, because researchers like Dr. Yan recognized the great difficulties involved at the time of the invention. The combination of the cited art does

not provide any suggestion, either implicit or explicit, that such processing as is currently claimed (*taking the claim as a whole*) could be done, at the time of the invention. The cited art does not provide the requisite motivation or suggestion to combine the reference teachings. Accordingly, Applicant respectfully requests that the
5 35 U.S.C. 103(a) rejections of independent claims 1, 13, 25, and 33 based on a combination of Junqua, Cohen, and Nosohara be withdrawn due to the assertion of unobviousness by Dr. Yan in the accompanying declaration.

In light of the foregoing, Applicant respectfully requests that the Examiner withdraw the rejection of independent claims 1, 13, 25, and 33 under 35 U.S.C. §103(a)
10 and allow the claims.

Because independent claims 1, 13, 25, and 33 are allowable, all claims dependent therefrom are also allowable (e.g., existing claims 3, 5, 7-12, 15, 17, 19-24, 26-27, 29-30, 32, 35 and 39-42).

15 CONCLUSION

Based on the foregoing, it is submitted that that all active claims 1, 3, 5, 7-13, 15, 17, 19-27, 29-30, 32-33, 35, 39-42 are presently in condition for allowance, and their passage to issuance is respectfully solicited. If the Examiner has any questions, the Examiner is invited to contact the undersigned at (503) 264-8074. Entry of this
20 amendment is respectfully requested.

Respectfully submitted,

25 Date:

8/5/04

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